

CLAIMS

What is claimed is:

1. A control system that controls operation of an engine to achieve a desired vehicle drive characteristic, comprising:

a pedal sensor that generates a pedal device position signal;

an adjusted pedal module that determines an adjusted pedal

5 based on said pedal device position signal and a vehicle speed; and

an engine torque request module that determines an engine torque request based on said adjusted pedal and an engine speed.

2. The control system of claim 1 further comprising a controller that controls said engine based on said engine torque request to produce a desired engine torque.

3. The control system of claim 1 further comprising an output shaft speed sensor that generates an output shaft speed signal, wherein said output shaft speed signal is indicative of a rotational speed of an output shaft of a transmission that is driven by said engine.

4. The control system of claim 3 wherein said vehicle speed is based on said output shaft speed signal.

5. The control system of claim 1 wherein said adjusted pedal is determined from a look-up table based on said pedal input position and said vehicle speed.

6. The control system of claim 1 wherein said adjusted pedal module calculates said adjusted pedal based on said pedal device position and said vehicle speed using a mathematical model.

7. The control system of claim 1 wherein said engine torque request is determined from a look-up table based on said adjusted pedal and said engine speed.
8. The control system of claim 1 wherein said engine torque request module calculates said engine torque request based on said adjusted pedal and said engine speed using a mathematical model.
9. The control system of claim 1 further comprising an engine speed sensor that generates an engine speed signal.
10. A control system that controls operation of an engine to achieve a desired vehicle drive characteristic, comprising:
 - a pedal device;
 - a pedal sensor that generates a pedal device position signal;5 and
 - a controller that determines an adjusted pedal based on said pedal device position signal and a vehicle speed, that determines an engine torque request based on said adjusted pedal and an engine speed and that controls said engine based on said engine torque request to produce a desired engine torque.10
11. The control system of claim 10 further comprising an output shaft speed sensor that generates an output shaft speed signal, wherein said output shaft speed signal is indicative of a rotational speed of an output shaft of a transmission that is driven by said engine.
12. The control system of claim 11 wherein said vehicle speed is based on said output shaft speed signal.

13. The control system of claim 10 wherein said adjusted pedal is determined from a look-up table based on said throttle input position and said vehicle speed.
14. The control system of claim 10 wherein said controller calculates said adjusted pedal based on said pedal device position and said vehicle speed using a mathematical model.
15. The control system of claim 10 wherein said engine torque request is determined from a look-up table based on said adjusted pedal and said engine speed.
16. The control system of claim 10 wherein said controller calculates said engine torque request based on said adjusted pedal and said engine speed using a mathematical model.
17. The control system of claim 10 further comprising an engine speed sensor that generates an engine speed signal.
18. A method of controlling operation of an engine to achieve a desired vehicle drive characteristic, comprising:
 - determining an adjusted pedal based on a pedal position and a vehicle speed;
 - 5 determining an engine torque request based on said adjusted pedal and an engine speed; and
 - controlling said engine based on said engine torque request to produce a desired engine torque.
19. The method of claim 18 further comprising:
 - generating a pedal input position signal using a pedal position sensor; and

- generating an output shaft speed signal using an output shaft speed sensor, wherein said output shaft speed signal is indicative of a rotational speed of an output shaft of a transmission that is driven by said engine.
20. The method of claim 19 further comprising determining said vehicle speed based on said output shaft speed signal.
21. The method of claim 18 wherein said adjusted pedal is determined from a look-up table based on said pedal input position and said vehicle speed.
22. The method of claim 18 wherein said adjusted pedal is calculated based on said pedal input position and said vehicle speed using a mathematical model.
23. The method of claim 18 wherein said engine torque request is determined from a look-up table based on said adjusted pedal and said engine speed.
24. The method of claim 18 wherein said engine torque request is calculated based on said adjusted pedal and said engine speed using a mathematical model.
25. The method of claim 18 further comprising generating an engine speed signal using an engine speed sensor.
26. A vehicle having an engine that is controlled using an engine torque-based control to achieve a desired vehicle drive characteristic, comprising:
- a pedal device; and

5 a controller that determines an adjusted pedal based on a position of said pedal device and a vehicle speed, that determines an engine torque request based on said adjusted pedal and an engine speed and that controls said engine based on said engine torque request to produce a desired engine torque.

27. The vehicle of claim 26 further comprising a pedal sensor that generates a throttle device position signal.

28. The vehicle of claim 26 further comprising:

 a transmission that is driven by said engine and that includes an output shaft; and

5 an output shaft speed sensor that generates an output shaft speed signal, wherein said vehicle speed is determined based on said output shaft speed signal.

29. The vehicle of claim 26 wherein said adjusted pedal is determined from a look-up table based on said pedal device position and said vehicle speed.

30. The vehicle of claim 26 wherein said controller calculates said adjusted pedal based on said pedal device position and said vehicle speed using a mathematical model.

31. The vehicle of claim 26 wherein said engine torque request is determined from a look-up table based on said adjusted pedal and said engine speed.

32. The vehicle of claim 26 wherein said controller calculates said engine torque request based on said adjusted pedal and said engine speed using a mathematical model.
33. The vehicle of claim 26 further comprising an engine speed sensor that generates an engine speed signal.